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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/824,455

04/14/2004

Wen-Chun Zheng

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6609

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01/26/2005

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EXAMINER

OWENS, DOUGLAS W

ART UNIT

PAPER NUMBER

2811

DATE MAILED: 01/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/824,455

Applicant(s)

ZHENG ET AL.

Examiner

Douglas W. Owens

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11-17 is/are allowed.
- 6) ☒ Claim(s) 1-5, 7, 9, 10 and 18-20 is/are rejected.
- 7) ☒ Claim(s) 6 and 8 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

1. Figures 1 – 5b should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1 – 5, 7, 9, 10 and 18 – 20 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent Application Publication No. 2003/0085453 to Eyman et al.

Regarding claim 1, Eyman et al. teach an apparatus (Fig. 3, for example) comprising:

a substrate (18);

a semiconductor die (16) disposed on the substrate and having an integrated circuit electrically connected to the substrate;

a load source (12) disposed over and in operative contact with the semiconductor die; and

a support member (34) disposed on the substrate, the support member comprising a flexible support (paragraph [0052], lines 3 – 5) device in operative contact with the load source.

Regarding claim 2, Eyman et al. teach an apparatus, wherein the flexible support device is arranged to flex dependent on a position of the support member relative to the semiconductor die.

Regarding claim 3, Eyman et al. teach an apparatus, wherein the support member is a stiffener (paragraph [0060; TABLE 1).

Regarding claim 4, Eyman et al. teach an apparatus, wherein the support member peripherally encloses the semiconductor die (paragraph [0063]).

Regarding claim 5, Eyman et al. teach an apparatus, wherein the flexible support device is a spring (paragraph [0053]).

Regarding claim 7, Eyman et al. teach an apparatus, wherein the load source comprises a heat dissipation device.

Regarding claim 9, Eyman et al. teach an apparatus, wherein an active side of the semiconductor die is disposed facing the substrate.

Regarding claim 10, Eyman et al. teach an apparatus, further comprising:

an adhesive disposed between the substrate and the support member (paragraph [0046]).

Regarding claim 18, Eyman et al. teach an integrated circuit package, comprising:

means for processing data (16);
means for housing the means for processing;
means for supporting the means for housing (18); and
support means (34) for bearing the load placed on the integrated circuit package, wherein the support means comprises flexible means for supporting the at least part of the load, and wherein a state of the flexible means is dependent on a position of the support means.

Regarding claim 19, Eyman et al. teach an integrated circuit package, wherein the support means peripherally surrounds the means for housing (paragraph [0063]).

Regarding claim 20, Eyman et al. teach an integrated circuit package further comprising:

means for attaching the support means to the means for supporting the means for housing (paragraph [0046]).

Allowable Subject Matter

4. Claims 11 – 17 are allowed.
5. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record does not teach, alone or in combination, a computer

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system including "a support member attached to the substrate *and* connected to a flexible support device in supportive contact with the load source" (emphasis added).

6. Claims 6 and 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Douglas W. Owens whose telephone number is 571-272-1662. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie C. Lee can be reached on 571-272-1732. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Douglas W Owens
Examiner
Art Unit 2811